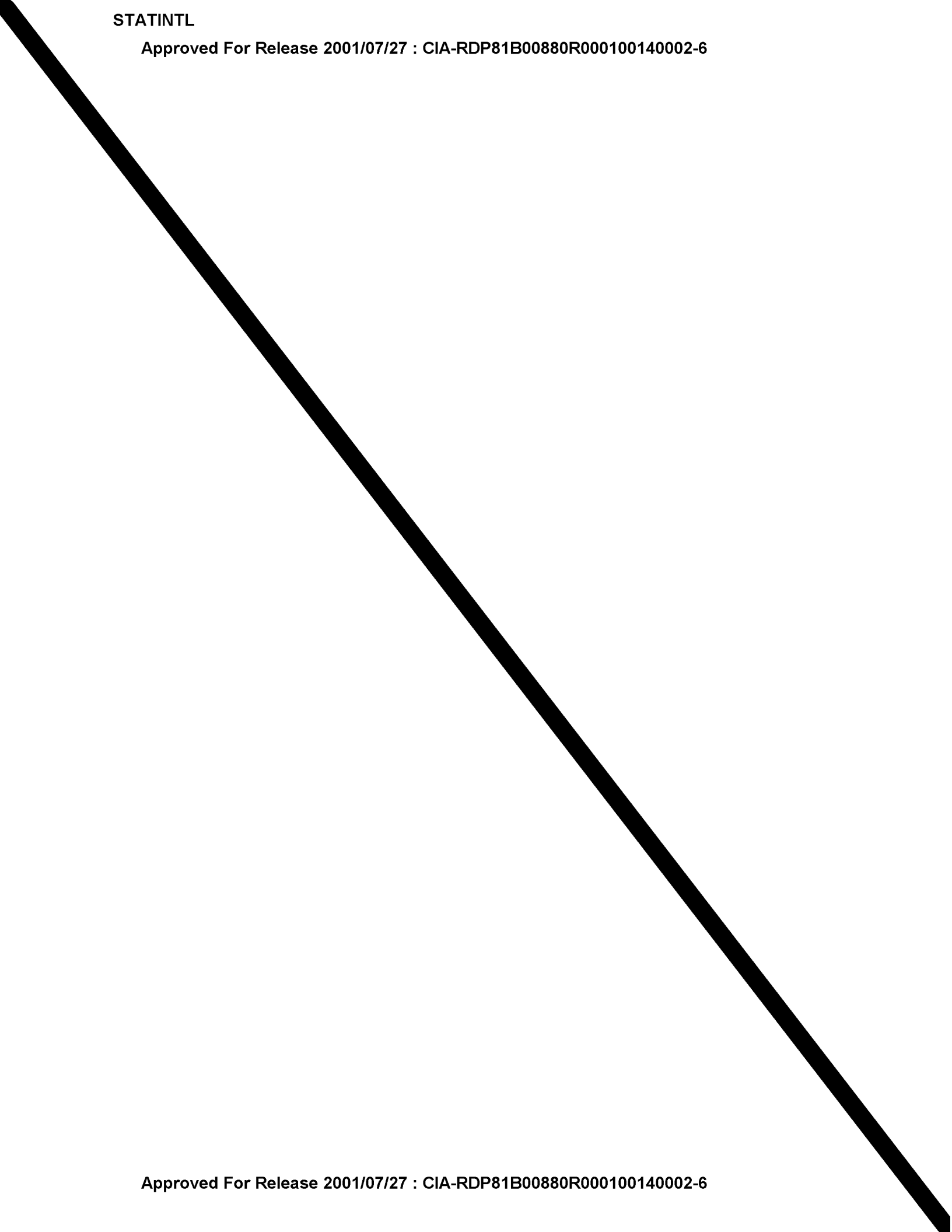

Approved For Release 2001/07/27 : CIA-RDP81B00880R000100140002-6

[redacted]

INTERDEPARTMENTAL COMMUNICATION

TO 25X1A [redacted] DEPT. 72-25 BLDG. 42 PLANT C-1 DATE 22 July 59

cc: [redacted] 25X1A

FROM 25X1A [redacted] DEPT. 72-25 BLDG. 63 PLANT A-1 EXT. 3160

SUBJECT: VIBRATION TEST ON 25X1A [redacted] USAF 44037, WITH SPECIAL EQUIPMENT

25X1A

The vibration test of the special equipment on the nose of the 25X1A [redacted] conducted at [redacted] on 21 July 59 indicates that the equipment will be free from excessive vibration.

The main equipment beam extending through the nose of the fuselage has a resonance at 14 cps to 16 cps. This resonance is of no importance from a dynamic loads or fatigue standpoint but may be detrimental to the operation of the associated electronic equipment if such equipment is not properly isolated. This frequency is in the region of propeller rps at about 2000 engine rpm and might possibly require avoidance of that rpm for satisfactory electronic operation.

The tubular structure has a resonance at 23 to 27 cps involving principally motion of the most forward portion of the framework--that extending beyond the last truss joint. This frequency is above propeller rps for maximum cruising engine rpm and below propeller blade passage for any cruising condition so that it should receive relatively little excitation. It should not vibrate enough to cause any difficulty of any kind in flight.

Other minor resonances of some of the truss rods in the framework were found at 35.5 cps, 39 cps and 49 cps. These frequencies are above the range of propeller rps and below the range of propeller blade passage, and although occurring in the range of engine rps they will receive such small excitation that their response will be insignificant.

The attachment of wires from the most forward truss joints to the fittings provided on the airplane will not introduce any new vibration problems nor change the character of the foregoing conclusions.

25X1A

[redacted]

Flight Dynamics Department Manager

25X1A APPROVED

[redacted]

Aerodynamics Division Engineer

eep

JFJ:EFP:vb

cc: FDF

Chron

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FORM 201-4

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